THE MINISTER OF STATE IN THE MINISTRY OF DEFENCE (SHRI KRISHNAM RAJU): (a) and (b) Yes, Sir. Trial testing of Kaveri engine upto Preliminary Flight Rating Tests (PFRT) is likely to be completed by December 2003 after which the engine would be integrated with LCA.

(c) The design of the Kaveri engine is indigenous. In the prototype manufacture, certain components/sub systems like Turbine Blade Castings and Heavy Forgings procured from abroad are used. Most of the special materials/ components for Kaveri engine have been developed indigenously and type certified. Plans have also been evolved to develop indigenous alternatives to imported components.

**Crisis in manufacturing of missiles and aircrafts**

†510. SHRI KHAN GHUFRAN ZAHIDI: Will the Minister of DEFENCE be pleased to state:

(a) whether it is a fact that the manufacturing of missiles and aircrafts is facing crisis due to the closure of Korba Plant after the privatisation of BALCO; and

(b) if so, the details thereof and the arrangements made by Government to continue manufacturing and defence research smoothly?

THE MINISTER OF DEFENCE (SHRI JASWANT SINGH): (a) No, Sir.

(b) Does not arise.

**Upgradation of Mig-21-93**

511. SHRI YADLAPATI VENKAT RAO: Will the Minister of DEFENCE be pleased to state:

(a) whether indigenously upgraded MIG-21-93 aircraft has since rolled out at Nasik unit of Hindustan Aeronautics Ltd.;

(b) if so, the special and innovative features of this aircraft; and

(c) if not, the reasons for delay?

THE MINISTER OF DEFENCE (SHRI JASWANT SINGH): (a) No, Sir.

†Original notice of the question was received in Hindi.

(b) and (c) The upgraded aircraft will have advanced avionics and improved weapon delivery systems. There was delay in prototype development, which has since been completed. The deliveries of series upgraded aircraft are expected to commence from 2001-2002, and be completed in about 4-5 years time.

**Acquisition of sophisticated artillery guns**

512. SHRI SANTOSH BAGRODIA: Will the Minister of DEFENCE be pleased to state:

(a) whether it is a fact that there are plans to acquire more sophisticated artillery guns than Bofors 155 mm guns; and

(b) if so, the details in this regard?

THE MINISTER OF STATE IN THE MINISTRY OF DEFENCE (SHRI KRISHNAM RAJU): (a) and (b) Various proposals to acquire a state-of-the-art 155 mm Artillery gun, are at present under consideration. No final decision has yet been taken in this regard.

**Operation "Poorna Vijay'**

513. SHRI PARMESHWAR KUMAR AGARWALLA: Will the Minister of DEFENCE be pleased to state:

(a) whether as a part of operation "Poorna Vijay" a full-fledged military exercise was conducted by the Indian Army in co-ordination with the Indian Airforce in the border States of Punjab and Jammu and Kashmir during the month of May, 2001;

(b) if so, the details thereof;

(c) whether the objectives for which the military exercise was conducted have since been achieved; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF DEFENCE (SHRI KRISHNAM RAJU): (a) Yes, Sir. The exercise was conducted in the Western sector including the border States of the region.

(b) A number of Army formations and the Indian Air Force took part in the exercise.